

This listing of claims will replace all prior versions of claims in the application.

Claim 1. (currently amended) A process for fractionating a vinylidene fluoride polymer, comprising:

adding a solvent precipitant to a solution comprising a vinylidene fluoride polymer and a solvent, to form a mixture, wherein the solvent has at least one polarizable functional group, wherein the precipitant is miscible with the solvent, and wherein the precipitant is added in an amount sufficient to produce, at a first temperature, a solid-liquid phase separation between the mixture and a fraction of the vinylidene fluoride polymer, based on the molecular weight of the vinylidene fluoride polymer, and

isolating the weight-fractionated vinylidene fluoride polymer from the mixture.

Claim 2. (original) The process of claim 1, wherein the vinylidene fluoride polymer comprises:

10 to 90 mol% of vinylidene fluoride; and
10 to 90 mol% of trifluoroethylene.

Claim 3. (original) The process of claim 1, wherein the vinylidene fluoride polymer is ferroelectric.

Claim 4. (original) The process of claim 1, wherein the molecular weight distribution ratio of the weight-fractionated vinylidene is less than 1.3.

Claim 5. (original) The process of claim 1, further comprising heating the mixture to a second temperature sufficient to form a single phase; and cooling the mixture to a third temperature effective to produce a solid-liquid phase separation between the mixture and a fraction of the vinylidene fluoride polymer based on the molecular weight of the polymer.

Claim 6. (currently amended) A process for fractionating a ferroelectric polymer, comprising:

adding a solvent precipitant to a solution comprising a ferroelectric polymer and a solvent, to form a mixture, wherein the solvent has at least one polarizable functional group, wherein the precipitant is miscible with the solvent, and wherein the precipitant is added in an amount sufficient to produce, at a first temperature, a solid-liquid phase separation between the mixture and a fraction of the ferroelectric polymer, based on the molecular weight of the ferroelectric polymer; and

isolating the fractionated ferroelectric polymer from the mixture, wherein the isolated fraction has a narrower molecular weight distribution than the initial ferroelectric polymer dissolved in the solution.

Claim 7. (original) The process of claim 6, wherein a molecular weight distribution ratio of the weight-fractionated polymer is less than 1.3.

Claim 8. (original) The process of claim 6, further comprising heating the mixture to a second temperature sufficient to form a single phase; and cooling the mixture to a third temperature effective to produce a solid-liquid phase separation between the mixture and a fraction of the ferroelectric polymer based on the molecular weight of the polymer.

Claims 9-13. (cancelled)